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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,669	08/16/2001	Masahiro Sakanaka	56238(71526)	4547

21874 7590 11/09/2005

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EXAMINER	
KHARE, DEVESH	
ART UNIT	PAPER NUMBER
1623	

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/913,669	SAKANAKA ET AL.	
	Examiner	Art Unit	
	Devesh Khare	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32-36,38-44,52 and 53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-36,38-44,52 and 53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. PCT/JP99/06804.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The amendments and remarks received on 09/01/2005 have been entered in view of the RCE request. Claims 32-36,38,39,42-44 and 52 have been amended. Claims 1-31 37 and 45-51 had been cancelled previously. The finality of the Office Action mailed on 6/01/2005 has been withdrawn.

The rejection under 35 U.S.C., 112, first paragraph of the Office Action mailed on 06/01/2005, has been overcome through applicants' amendments.

The terminal disclaimer filed on 2/28/2003 over application 09/887,399, now issued as U.S. Patent No. 6,579,853 has been accepted.

During the course of reconsideration of the application, a prior art reference not previously disclosed by the applicants or the examiner came to light (see rejection below).

Claims 32-36, 38-44, 52 and 53 are currently pending in this application.

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 42-44 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The concentration of Rb_1 now claimed " 1ng/ml or less"; " 1 pg/ml or less"; and "100 fg/ml or less" in amended claims 42-44 does not have adequate

support in the specification. The specification states on page 30, the concentration of Rb_1 as 1.2 mg –12 mg/day and on page 56, Example 4, as 12 µg or 60 µg.

The court held that "subgenus range was not supported by generic disclosure and specific example within the subgenus range"; See, e.g, *In re Lukach*, 442 F.2d 967, 169 USPQ 795 (CCPA 1971); the court also held that "a subgenus is not necessarily described by a genus encompassing it and a species upon which it reads" (see *In re Smith,* 458 F.2d 1389, 1395, 173 USPQ 679, 683 (CCPA 1972). See also MPEP 2163.

Consequently, there is nothing within the instant specification of the invention as it is now claimed. See *Vas-Cath Inc. v. Mahurkar*, 19 USPQ 2d 1111, CAFC 1991, see also *In re Winkhaus,* 188 USPQ 129, CCPA 1975.

35 U.S.C. 112, second paragraph rejection

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> *The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

Claims 32-36, 38-44, 52 and 53 are rejected under the second paragraph of 35 U.S.C. 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "metabolites" is a relative term in all occurrences of the claims, which renders the claims indefinite. In the absence of the specific metabolite to the ginsenoside (Rb_1) claimed, the identity of said metabolites would be difficult to describe and the metes and bounds of said metabolites applicants regard as the invention cannot be sufficiently determined because they have not been particularly pointed out or distinctly articulated in the claims.

Claims which depend from an indefinite claim which fail to obviate the indefiniteness of the claim from which they depend are also seen to be indefinite and are also rejected for the reasons set forth supra.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

Claims 32-36, 38-44, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakanaka et al. (Sakanaka) (Jpn. J. Pharmacol. 67, Suppl. I, 297 P,1995) in combination with Liu (U.S. Patent 4,708,949) in view of Zhang et al. (Zhang) (Acta Pharmacologica Sinica 17(1), 44-48, 1996 Jan.)

Claims 32-36, 38-44, 52 and 53 are drawn to a method of treating a patient suffering from a traumatic or compression injury of a nervous tissue by administering to said patient a therapeutically effective amount of a pharmaceutical composition comprising a therapeutic agent selected from ginsenoside Rb_1, its metabolites and salts thereof. Dependent claims are drawn to: suppressing secondary degeneration of the injured tissue which is a spinal cord; ameliorating paralysis or paraplegia caused by said injury; suppressing apoptosis or apotosis-like cell death of oligodendrocytes; administration of said composition by a single or continuous infusion to the patient; and the concentration

of ginsenoside Rb_1 " 1ng/ml or less"; " 1 pg/ml or less"; or "100 fg/ml or less" (it is noted that these concentration are not supported by the specification).

Sakanaka teaches red ginseng powder containing ginseng saponins and ginsenoside Rb_1 prevented "ischemia-induced learning disability and rescued ischemic hippocampus CA1 neurons in gebils (see Abstract, P 297).

While the Sakanaka teaches that ginsenoside Rb_1 is one of the neuroprotective molecules within ginseng root, which can be administered by intraperitoneal injections, Sakanaka differs from applicant's method in that Sakanaka does not suggest the effective concentrations of ginsenoside Rb_1.

Liu teaches in abstract the therapeutic compositions composed of four plant extracts: ginsenoside, tetramethyl pyrazine, astragalan and atractylol. This therapeutic composition is highly effective in treating cerebral vascular diseases (also see claims 1-4). In claims 13-17, Liu teaches the method of treating a patient suffering from cerebrovascular disease and impaired neurofunction with a pharmaceutical composition comprising ginsenoside.

Zhang teaches that ginsenosides such as Rb_1 from Panax ginseng protected rat brains from cerebral infarction (p. 44, 1st para.). Zhang discloses the effects of ginsenoside Rb_1 in rat model when used in the concentration of 10 mg- 40 mg/kg (pp. 46-47, Tables 1-3).

It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In*

re Aller, 220 F2d 454,456,105 USPQ 233; 235 (CCPA 1955). See MPEP 2144.05 part II A. Variance of dosage amounts with regard to known paharmaceutically active ingredients was well known in the art. One of ordinary skill in the art would have been motivated to modify the dosage amounts of ginsenoside Rb_1 in order to enable the treatment protocol to be matched with the demands and needs of individuals who needed treatment. Such variations are considered optimization of results effective variables, conventional practice in the art of pharmacology.

Therefore, one of ordinary skill in the art would have found the applicants claimed method of treating a patient suffering from a traumatic or compression injury of a nervous tissue by administering to said patient a therapeutically effective amount of a pharmaceutical composition comprising a therapeutic agent selected from ginsenoside Rb_1 to have been obvious at the time the invention was made having the above references before him because Sakanaka and Liu teach that ginsenoside Rb_1 from plant source is to prevent "ischemia-induced learning disability and rescued ischemic hippocampus CA1 neurons in gebils" and of treating a patient suffering from cerebrovascular disease; and Zhang teaches effective concentrations of ginsenoside Rb_1 in protecting rat brains from cerebral infarction. The motivation for doing so is provided by Sakanaka, which suggests ginsenoside Rb_1 is a neuroprotective molecule (p 297, last line).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Devesh Khare whose telephone number is 571-272-0653. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at 571-272-0661. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242.
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Devesh Khare, Ph.D.,JD.
Art Unit 1623
November 4,2005

JAMES O. WILSON
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